

4. (Twice Amended) A group III nitride compound semiconductor device, comprising:
a substrate;
an undercoat layer formed on said substrate and having a surface with convex portions each shaped like a truncated hexagonal pyramid; and
group III nitride compound semiconductor layers formed on said undercoat layer and having a device function,
wherein said undercoat layer comprises GaN doped with magnesium and said undercoat layer is also doped with an n-type dopant and is of an n-type as a whole.

5. (Amended) A group III nitride compound semiconductor device according to claim 1, wherein said substrate comprises one of sapphire, SiC, and silicon single crystal.

7. (Twice Amended) A group III nitride compound semiconductor device according to claim 1, wherein said group III nitride compound semiconductor layers comprise one of a light-emitting device, a photodetector, and an electronic device as a whole.

32. (Amended) A group III nitride compound semiconductor device, comprising:
a substrate having an upper surface;
an undercoat layer formed directly on an entirety of said upper surface of said substrate, in which a cross-section of an upper surface of said undercoat layer is characterized by a sectionally trapezoid shape; and
group III nitride compound semiconductor layers formed on said undercoat layer and having a device function.

33. (Amended) A group III nitride compound semiconductor device according to claim 32, wherein the sectionally trapezoid shape includes convex portions, each of said convex portions being shaped like a truncated hexagonal pyramid.